

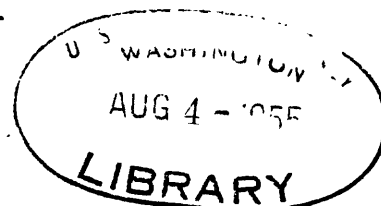
Chesterman, Charles Wesley, 1913 -

TUNGSTEN DEPOSITS IN THE SOUTHERN SANTA ROSA MOUNTAINS
PARADISE DISTRICT, HUMBOLDT COUNTY, NEVADA

C. W. Chesterman, 1913 -

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Abstract



Four small, relatively undeveloped tungsten deposits in the southern end of the Santa Rosa Mountains, Humboldt County, Nev., contain a combined reserve of a few thousands tons of ore of a grade ranging from 0.75 percent to 1.5/WO₃ percent. Scheelite occurs in tactite on three of the deposits, and in quartzite on the fourth. Further exploration might increase the total reserves in the area.

Introduction

Four small, relatively undeveloped tungsten deposits in the southern Santa Rosa Mountains, Humboldt County, Nev., are described in this report. They were mapped by Peter Joralemon, M. R. Klepper and the writer, in June 1943. The four properties, listed in descending order of importance, are: 1. The Nutter-Fitzgerald (King) claims; 2. The Scossa (Great Northern) claims; 3. The Johnson (January) claims; and 4. The Davis-Hicks (Big Wind) claims.

The Nutter-Fitzgerald (King) claims

Location.--These claims are on the lower slopes of the Santa Rosa Mountains at the southern end of the range. They may be reached by 3 miles of poor dirt road which branches from the Winnemucca-Paradise highway at a point 6 miles north of Paradise Junction.

Ownership.--The King Claims Nos. 1-4 are held by H. L. Nutter and T. J. Fitzgerald, both of Winnemucca, Nev.

Equipment and workings.--The workings consist of one 40-foot adit and several pits, trenches, and cuts. All work on the property has been done by hand and the only equipment consists of hand tools.

Geology and ore deposits.—A series of metamorphosed sedimentary rocks, including complexly interbedded quartzite, schist, and slate, has been intruded by medium-grained biotite granite (pl.1). The bedded rocks have a general strike of N. 38° and a dip of 70° W.

Scheelite is disseminated in three, possibly four, beds of hard, very brittle, extremely fine-grained to glassy quartzite interbedded with the other metamorphosed sedimentary rocks. The individual scheelite-bearing beds, exposed only in several pits and trenches, have an average thickness of about 2½ feet. The scheelite is very fine-grained and difficult to detect, even under ultra-violet light, as the quartzite is stained with limonite.

Reserves and grade.—Assays of two samples collected from the best explored beds gave the following results:

Sample No. 1. Chip sample from lower scheelite-bearing quartzite, 0.98 percent WO₃.

Sample No. 2. Chip sample from scheelite-bearing quartzite bed located just uphill from lower bed (bed of greatest length), 0.40 percent WO₃.

Several assays made for the owners have all indicated a content of WO₃ in excess of 1 percent.

At the present stage of development of the prospect, it is difficult to make an accurate appraisal of reserves. However, there may be at least 800 tons of inferred ore, with an average grade of 1.0 percent to 1.5 percent WO₃.

The Johnson (January) claims

Location and ownership.—The January Claims Nos. 1, 2, 3, and 5, just north of the Nutter-Fitzgerald claims and reached by the same dirt road, are held by W. E. Johnson of Winnemucca, Nev.

Equipment and workings.—Equipment on the property is limited to hand tools, and a poorly equipped forge. The workings include one adit at least 300 feet long, which was driven in a search for silver ore, several small cuts, and a caved adit with a shallow inclined shaft.

Geology and ore deposits.—A series of metamorphosed sedimentary rocks, including hornfels, quartzite, biotite schist, and scheelite-bearing tactite, has been invaded by biotite granite (pl. 2). The quartzite and schist are similar to those occurring on the Nutter-Fitzgerald claims. The hornfels does not crop out on the surface, but exposures in the long adit show it to be a soft, thinly bedded rock, brown in color but with numerous thin streaks of light green. It contains a little scheelite.

The tactite, composed essentially of garnet, epidote, and quartz, is exposed only in the underground workings. Two ore-bearing tactite beds were recognized in the field. One, exposed at the extreme western end of the long adit, is more than 4 feet wide and averages about 0.75 percent WO_3 . The second bed, about 20 feet east of the first, is less than 1 foot wide and contains an average of about 1 percent WO_3 . One sample from the second bed was assayed at 1.2 percent WO_3 . A 5-ton shipment of ore to the stockpile at Battle Mountain, Nev., showed assay results of 1.5 percent WO_3 .

Reserves.—Neither of the two ore-bearing tactite beds has been sufficiently explored to permit an accurate estimate of reserves. However, based on the assumption that the first bed continues for a strike distance of 100 feet with an average width of 4 feet and an average grade of 0.75 percent WO_3 , a reserve of 4,000 tons of ore may be inferred.

The Davis-Hicks (Big Wind) claims and the Scossa (Great Northern) claims.

Location and ownership.—These two groups of claims are a few miles north of the Johnson property, on the same road. The Big Wind claims Nos. 1-4 are

held jointly by J. B. Davis and J. W. Hicks of Winnemucca, Nev. James and Arnold Scossa of Winnemucca hold six claims, the Great Northern Nos. 1-6, and a fraction of a seventh claim.

Equipment and workings.—Work on both properties is done by hand and equipment is limited to hand tools. The Davis-Hicks claims are prospected by means of pits, trenches, and cuts. Workings on the Scossa claims consist of a number of trenches and cuts and two 40-foot adits, each being driven by one of the Scossa brothers.

Geology and ore deposits.—A series of metamorphosed sedimentary rocks has been invaded by dikes and small stocks of granite, aplite, alaskite, and diorite (pl. 3). The metamorphosed sedimentary rocks consist of quartzite, mica-andalusite schist, layered calc-silicate rock resembling an igneous rock, limestone, slate, and scheelite-bearing tactite.

Scheelite is confined to the tactite. Exposures of tactite on the Davis-Hicks property indicate that there it contains little or no scheelite, but two beds, each about 4 feet wide, on the Scossa claims, appear to contain considerable scheelite.

Reserves.—There are no economically minable amounts of scheelite ore on the Davis-Hicks claims. On the Scossa claims, a 4-foot bed of tactite, with an average of 0.75 percent WO_3 , can be traced for a distance of 100 feet in the eastern part of the property, and may contain about 1,500 tons of inferred ore. Another, similar bed, somewhat better explored, may contain at least 2,400 tons of inferred ore, with an average grade of 0.75 percent WO_3 , although assays of samples from this bed have averaged over 1.43 percent WO_3 .

It is possible that further exploration might increase the reserves from this district.